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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/044,764 | 01/09/2002 | Frank Vanselow | TID-29699 | 8341 |

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| EXAMINER |
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TALAPATRA, ANIKA F

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| ART UNIT | PAPER NUMBER |
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2631

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------|--------------------------|--|
| Office Action Summary | Application No. 10/044,764 | Applicant(s) VANSELOW | |
| | Examiner Anika F. Talapatra | Art Unit 2631 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/044,764.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1/9/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10044764, filed on 9 January 2002.

Information Disclosure Statement

2. Document GB 1161206 of the information disclosure statement (IDS) submitted on 9 January 2002 is in compliance with the provisions of 37 CFR 1.97. Accordingly, document GB 1161206 is being considered by the examiner.

Document EP 0746114A1 of the information disclosure statement filed 9 January 2002 fails to comply with 37 CFR 1.98(a)(2), which requires an English translation of each foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Document EP 0746114A1 has not been considered:

Specification

3. The abstract of the disclosure is objected to because the abstract is longer than 150 words. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

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The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 rejected under 35 U.S.C. 102(b) as being anticipated by Ketterling (U.S. Patent 5467373) (hereafter referred to as Ketterling). Ketterling teaches a circuit for generating a phase-locked frequency-modulatable carrier frequency signal (figure 1a), comprising: a voltage-controlled crystal oscillator for generating a reference frequency (figure 1a, 16); a voltage-controlled oscillator (figure 1a, 10) generating a carrier frequency (figure 1a, f_v) as a function of control signal (figure 1a, output from 14); a phase detector, or phase discriminator (figure 1a,

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11), which compares a reference frequency signal (figure 1A, f_R) to a signal derived from the carrier frequency signal (figure 1a, f_T), to produce a control signal such that the difference between the signal derived from the carrier frequency signal and the reference frequency signal is zero; and a mixer stage (figure 1a, 14) for generating the derived signal, which mixes a signal output from the digital frequency generator (figure 1a, U_{mod}) with a signal generated by frequency division of the carrier frequency signal output by the voltage-controlled oscillator so that the derived signal frequency equals that of the reference frequency. The reference frequency generator is applied directly to the phase detector (column 3, line 1- column 6, line 13; figure 1a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Ketterling, further in view of Minami (U.S. Patent 5396521) (hereafter referred to as Minami). Ketterling teaches a circuit for generating a phase-locked frequency-modulatable carrier frequency signal. Ketterling does not teach that the circuit comprises a digital frequency generator that generates a modulatable signal as a complex signal having two components 90 degrees out of phase relative to each other are applied to the mixer stage. Minami teaches a circuit for generating a

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phase-locked frequency-modulatable signal, comprising a 90 degrees phase shifter (Minami, figure 1, 24) for generating a modulatable signal as a complex signal having two components 90 degrees out of phase (Minami, column 3, line 22- column 4, line 13). It is well known in the art at the time of the invention to use a modulatable signal that is complex, in order to transmit more data, on the real and imaginary components of the signal, using less bandwidth. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to use a modulatable signal that is complex in the system taught by Kettering, in order to increase the amount of data transmitted in a bandwidth.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- i. U.S. Patent Application Publication 2004/0196924, Wilson, figure 1; and
- ii. U.S. Patent Application Publication 2003/0030497, Duncan et al., figure 17-18.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anika Talapatra whose telephone number is 571-272-6039. The examiner can normally be reached on Monday to Friday, 08:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.T.


MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER